



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

SUREBEAM CORPORATION

Serial No. 09/912,576

Filed: July 24, 2001

For: **FIXTURES FOR PROVIDING AN  
IRRADIATION WITHIN  
ACCEPTABLE LIMITS**

Date: November 13, 2002

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8

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Ellsworth R. Roston, Reg. No. 16,310

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**COMMUNICATION TO THE PATENT OFFICE**

Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

The following prior art references have been cited by the Examiner in the PCT application PCT/US02/23545 (our docket No. SUREB-61806) corresponding to U.S. application serial No. 09/912,576 (our docket No. SUREB-57333).

DATABASE WPI  
Section Ch, Week 200114  
Derwent Publications Ltd., London, GB;  
Class-K08, An 2001-127961  
XP002209102  
& JP 2000 312708 A (NKK Plant Kensetsu KK)  
14 November 2000 (2000-11-14)  
abstract; figures 4, 6

Relevant to Claim No. 1-52

US 5 396 074 a (Peck Richard O et al.)  
7 March 1995 (1995-03-07)  
cited in the application  
column 1, line 13 - column 1, line 18  
column 4, line 52 - column 6, line 37;  
figures 1, 2

Relevant to Claim No. 1-52

SERIAL NO.	ISSUED	TITLE	INVENTOR
5,396,074	3/7/95	IRRADIATION SYSTEM UTILIZING CONVEYOR- TRANSPORTED ARTICLE CARRIERS	PECK, et al.
WO 00/68955	11/16/00	ARTICLE IRRADIATION SYSTEM HAVING INTERMEDIATE WALL OF RADIATION SHIELDING MATERIAL WITHIN LOOP OF A CONVEYOR SYSTEM THAT TRANSPORTS THE ARTICLES	WILLIAMS, et al.
WO 99/67793	12/29/99	ARTICLE IRRADIATION SYSTEM HAVING INTERMEDIATE WALL OF RADIATION SHIELDING MATERIAL WITHIN LOOP OF A CONVEYOR SYSTEM THAT TRANSPORTS THE ARTICLES	WILLIAMS, et al.
WO 01/25754 A1	4/12/01	ARTICLE IRRADIATION SYSTEM IN WHICH ARTICLE TRANSPORTING CONVEYOR IS CLOSELY ENCOMPASSED BY SHIELDING MATERIAL	WILLIAMS, et al.
WO 01/00249 A1	1/4/01	SYSTEM FOR, AND METHOD OF, IRRADIATING ARTICLES TO STERILIZE THE ARTICLES	ALLEN, et al.
4,983,849	1/8/91	APPARATUS AND METHOD FOR PROMOTING UNIFORM DOSAGE OF IONIZING RADIATION IN TARGETS	THOMPSON, et al.

US Serial No. 09/912,576  
Attorney Docket No. SUREB-57333

PATENT

Copies of the prior art references are enclosed.

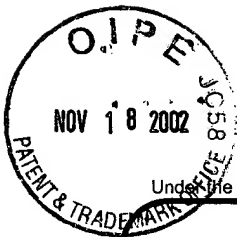
Respectfully submitted,

FULWIDER PATTON LEE & UTECHT, LLP

By: Ellsworth R. Roston  
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ERR:dmc:256464.1  
Enclosures

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PTO/SB/21 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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<b>TRANSMITTAL FORM</b>  <i>(to be used for all correspondence after initial filing)</i>	<b>Application Number</b>	09/912,576
	<b>Filing Date</b>	07/24/2001
	<b>First Named Inventor</b>	J. Thomas Allen
	<b>Group Art Unit</b>	
	<b>Examiner Name</b>	
<b>Total Number of Pages in This Submission</b>		<b>Attorney Docket Number</b> SUREB-57333

ENCLOSURES (check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): <b>Return Postcard</b> Communication to the Patent Office
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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 02/23545

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61L2/08 A23L3/26 G21K5/08 G21K5/10 H01J37/30

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61L A23L G21K H01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>DATABASE WPI Section Ch, Week 200114 Derwent Publications Ltd., London, GB; Class K08, AN 2001-127961 XP002209102 &amp; JP 2000 312708 A (NKK PLANT KENSETSU KK) , 14 November 2000 (2000-11-14) abstract; figures 4,6</p> <p>---</p>	1-52
Y	<p>US 5 396 074 A (PECK RICHARD O ET AL) 7 March 1995 (1995-03-07) cited in the application column 1, line 13 -column 1, line 18 column 4, line 52 -column 6, line 37; figures 1,2</p> <p>---</p> <p style="text-align: center;">-/--</p>	1-52



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special-categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\* & \* document member of the same patent family

Date of the actual completion of the international search

27 September 2002

Date of mailing of the international search report

07/10/2002

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 02/23545

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 00 68955 A (TITAN CORP) 16 November 2000 (2000-11-16) page 2, line 28 -page 7, line 4; figures 1,2 ---	1-52
A	WO 99 67793 A (TITAN CORP) 29 December 1999 (1999-12-29) page 2, line 15 -page 5; figures 1,2 ---	1-52
A	WO 01 25754 A (TITAN CORP) 12 April 2001 (2001-04-12) page 6, line 5 -page 17, line 17; figures 1-7 ---	1-52
A	WO 01 00249 A (TITAN CORP) 4 January 2001 (2001-01-04) page 4, line 6 -page 13, line 21; figures 1-4 ---	1-52
A	US 4 983 849 A (THOMPSON CHESTER C ET AL) 8 January 1991 (1991-01-08) column 4, line 29 -column 6, line 23; figures 1-12 -----	1-52

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 02/23545

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP 2000312708	A	14-11-2000	NONE	
US 5396074	A	07-03-1995	AT 197857 T	15-12-2000
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			AU 1366201 A	10-05-2001
			BR 0007205 A	16-10-2001
			EP 1144983 A1	17-10-2001
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			EP 1196201 A1	17-04-2002
			WO 0100249 A1	04-01-2001
US 4983849	A	08-01-1991	NONE	

## XP-002209102

AN - 2001-127961 [14]

AP - JP19990124109 19990430

CPY - NIKN

DC - K08 P34 V05 X25

FS - CPI;GMPI;EPI

IC - A61L2/08 ; G21K5/04 ; H01J37/30

MC - K08-X K09-B K09-D

- V05-J05 X25-P01 X25-P02

PA - (NIKN ) NKK PLANT KENSETSU KK

PN - JP2000312708 A 20001114 DW200114 A61L2/08 006pp

PR - JP19990124109 19990430

XA - C2001-037928

XIC - A61L-002/08 ; G21K-005/04 ; H01J-037/30

XP - N2001-094490

AB - JP2000312708 NOVELTY - A dose regulator (10) is arranged between an electron beam source and the substance to be processed so as to regulate irradiation of the electron beam to all points of a substance perpendicular to the direction of the radiated electron beam and to maintain the ratio of absorption of the electron beam passing through the dose regulator and substance and is given by a predetermined formula.

- DETAILED DESCRIPTION - The ratio of absorption by the dose regulator and substance to be processed is given by the following expression  $P1 \times X1 + P2 \times X2$ , where P1 and P2 are respectively the density of material of the dose regulator and substance, and X1 and X2 are the distances traveled by the electron beam through the dose regulator and substance.

- USE - For irradiating electron beams for sterilizing drugs, sanitary goods, or foodstuffs.

- ADVANTAGE - Since the dose regulator is interposed between the electron beam source and substance to be processed and since the ratio of absorption of electron beam by dose regulator and substance is fixed, an electron beam of uniform dose is irradiated to the substance irrespective of the shape of the substance.

- DESCRIPTION OF DRAWING(S) - The figure shows the dose regulator.

- Dose regulator 10

- (Dwg.4/6)

IW - ELECTRON BEAM IRRADIATE APPARATUS FOOD DOSE REGULATE ELECTRON BEAM SOURCE SUBSTANCE PROCESS MAINTAIN ABSORB RATIO BEAM PASS THROUGH SUBSTANCE

IKW - ELECTRON BEAM IRRADIATE APPARATUS FOOD DOSE REGULATE ELECTRON BEAM SOURCE SUBSTANCE PROCESS MAINTAIN ABSORB RATIO BEAM PASS THROUGH SUBSTANCE

NC - 001

OPD - 1999-04-30

ORD - 2000-11-14

PAW - (NIKN ) NKK PLANT KENSETSU KK

TI - Electron beam irradiation apparatus for sterilizing foodstuffs, has dose regulator between electron beam source and substance to be processed to maintain absorption ratio of beam passing through it and substance